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NOTES ON GEOGRAPHIC DISTRIBUTION

Amphibia, Anura, Leptodactylidae, *Leptodactylus furnarius*: Rediscovery and distribution extension in the state of Rio Grande do Sul, Brazil.

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Leptodactylus furnarius Sazima and Bokermann, 1978 (Figure 1) belongs to the *Leptodactylus fuscus* species group (Frost 2007), which contains species that build underground chambers to lay eggs in foam nests (Giaretta and Kokubum 2004). Males vocalize on wet ground and shallow water bodies where low and sparse vegetation grows or inside the chambers, near to their foam nests (Achaval and Olmos 2003; Eterovick and Sazima 2004).

Leptodactylus furnarius has a wide but discontinuous distribution, probably as consequence of scarce sampling effort, being more frequent in open formations at central and southeastern Brazil (Heyer and Heyer 2004). In the state of Rio Grande do Sul, the species is known only from some specimens collected in 1978 in the municipality of Santa Maria (Heyer 1978). The species was also recorded in Uruguay, just besides the Brazilian border (Canavero et al. 2001).

Garcia and Vinciprova (2003) included *L. furnarius* in the Data Deficient (DD) category in a list of the threatened fauna of Rio Grande do Sul. They attribute the rarity of this taxon mainly to the lack of more intense surveys in areas of probable occurrence of this species in the state.

Figure 1. *Leptodactylus furnarius* (DZ 2678), adult from Cacequi, Rio Grande do Sul, Brazil.

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We rediscovered *L. furnarius* in the municipality of Santa Maria (29°44' S, 53°45' W) after 23 years. Individuals were captured in pitfall traps placed in a grassland of the Pampa Biome on 21 February 2001 (n = 3), 24 January 2002 (n = 1) and 24 January 2003 (n = 1). Preserved specimens were deposited in the Herpetological Collection of the *Universidade Federal de Santa Maria* (ZUFSM 2743, 2747, 2751, 3030, 3379). Later, we found the species at three additional localities: between São Gabriel and Lavras do Sul (30°38'58.6" S, 54°26'19.9" W; 6 November 2006), São Francisco de Assis (29°20'31.9" S, 55°11'26.6" W; 20 November 2006), and Cacequi (29°55'58.2" S, 54°41'03.5" W; 21 February 2007). These individuals were deposited in the herpetological collection of *Universidade Federal do Rio Grande do Sul* (UFRGS 2637, 2682, and 2678, respectively). The new records extend the distribution range of the species 146 km northeast, 121 km southeast and 92 km east from the previous record in Santa Maria (Figure 2).

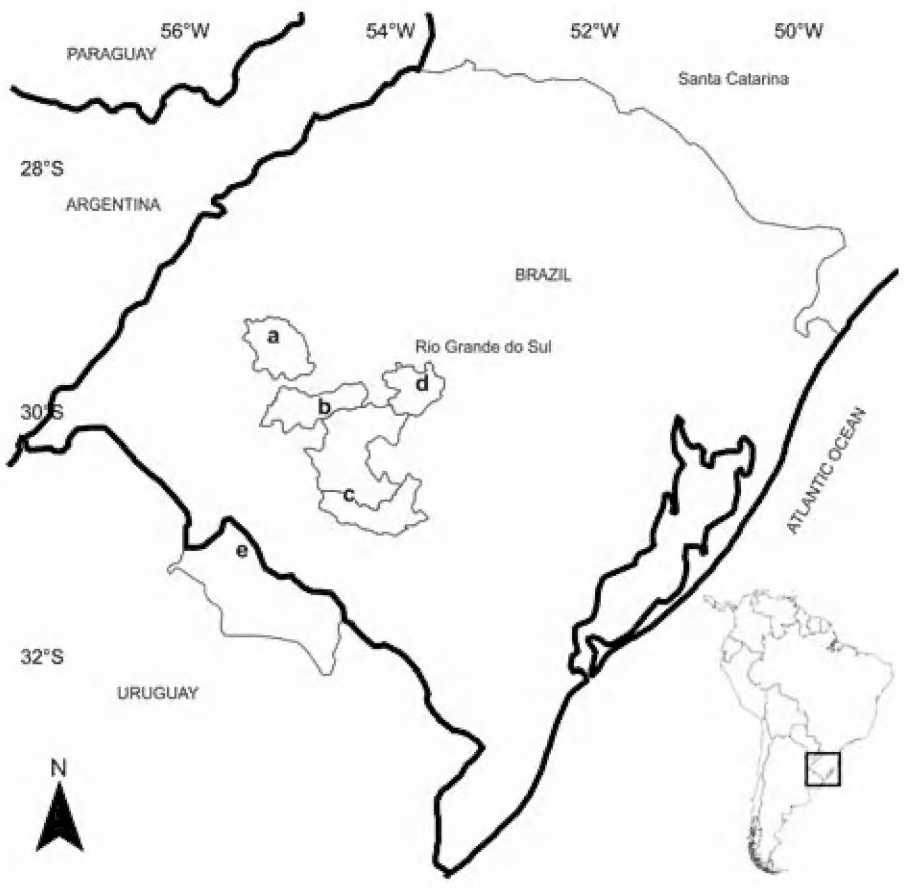

Figure 2. Records of *Leptodactylus furnarius*, where (a) = municipality of São Francisco de Assis, (b) = municipality of Cacequi, (c) = between the municipalities of São Gabriel and Lavras do Sul (new records), (d) = municipality of Santa Maria (rediscovery), state of Rio Grande do Sul, Brazil, and (e) = Rivera Department, Uruguay.

Due to the morphological similarity between *L. furnarius* and *L. gracilis* and to the fact that these may be sympatric and syntopic species, we reexamined all individuals of the latter placed in the main herpetological collections of Rio Grande do Sul [*Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul* (n = 71), *Museu de Ciências Naturais da Fundação Zoobotânica do Rio Grande do Sul* (n = 204), *Universidade Federal do Rio Grande do Sul* (n = 21), and *Universidade Federal de Santa Maria* (n = 157)], searching for specimens of *L. furnarius* that could be incorrectly identified as *L. gracilis*. The main difference is the presence of longitudinal white stripes on the thighs of *L. gracilis*, which are absent in *L. furnarius* (Figure 3). However, no other individuals of this species were found during this revision work.

Three of the four recent records of *L. furnarius* were based in only one collected individual. Although the information on geographic distribution of amphibians in Rio Grande do Sul is scarce and fragmented, we noted that in several fieldworks realized in open formations of southern Rio Grande do Sul by the authors in 2006 and 2007 this species was hardly found, occurring at low densities when compared with most of leptodactylid frogs recorded in this Brazilian state. According to Garcia and Vinciprova (2003), this species could be naturally rare in Rio Grande do Sul because of the southernmost limit of its distribution. Our data, including field records and the revision of herpetological collections, are strong evidences about the rarity and low density of *L. furnarius* in the state of Rio Grande do Sul.

We emphasize the importance of a larger number of herpetological surveys, mainly in the states of Rio Grande do Sul and Santa Catarina, where the occurrence of *L. furnarius* is highly predicted but a distribution gap remains (see Heyer and Heyer 2004). Information about the conservation status of the Data Deficient (DD) species need to be readily obtained in order to avoid them to become threatened by the lack of adequate and opportune actions for their conservation (Silvano and Segalla 2005).

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Figure 3. Main morphological differences between *Leptodactylus gracilis* (left), UFRGS 02673, from São Sepé, Rio Grande do Sul, and *Leptodactylus furnarius* (right), UFRGS 02678, collected in Cacequi, Rio Grande do Sul, indicated by black arrows and ellipsis. Note the presence of white stripes in the dorsal surface of the shank of *L. gracilis*, which are absent in *L. furnarius*. The scale bar represents 10 mm.

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